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09/849,300	05/04/2001	Dan Omry	U 013445-1	4112

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EXAMINER

NGUYEN, TAI T

ART UNIT PAPER NUMBER

2632

DATE MAILED: 06/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/849,300	<b>Applicant(s)</b> OMRY ET AL.	
	<b>Examiner</b> Tai T. Nguyen	<b>Art Unit</b> 2632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-145 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-145 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### ***Double Patenting***

1. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

2. Claims 1-145 are rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-145 of prior U.S. Patent No. 10/032,815. This is a double patenting rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-145 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horne et al. (US 6,313,749).

**Regarding claim 1**, Horne et al. disclose a sleepiness monitor (10) for determining the alertness of a driver including all steps as follows:

sensing at least one first movement (steering wheel) characteristic of at least a first part of a motor vehicle(12, figure 1; col. 6, lines 15-19);

sensing at least one second movement (road wheel) characteristic of at least a second part of a motor vehicle (figure 1; col. 6, lines 31-36);

Horne et al. disclose the instant claimed invention except for: employing at least one time relationship between the at least one first movement characteristic and the at least one second movement characteristic in order to sense and distinguish between driver initiated movement and non-driver initiated movement. Since Horne et al. disclose an internal microprocessor that is programmed to perform calculation according to driver and sensory inputs and to provide an appropriated audio/visual indication of sleepiness (col. 8, lines 14-17) and determining the driver sleepiness level based upon rhythm of sleepiness, timing and duration of sleep (col. 9, lines 1-67).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to know that the microprocessor is distinguishing between driver initiated movement and non-driver initiated movement based upon a driver input from a steering wheel movement sensor (13, col. 6, lines 14-16) and a non-driver input

from a drive shaft sensor (27; col. 6, lines 31-36) in order to provide an indication for the purpose of awaken/alert the driver as he/she has been falling asleep.

**Regarding claims 2-5**, as mentioned in claim 1 above, wherein the at least one first movement characteristic and at least one second movement characteristic comprises a steering wheel movement and a road wheel movement characteristic (col. 6, lines 15-36).

**Regarding claim 6**, Horne et al. disclose the instant claimed invention except for: the first and the second locations are located respectively at upstream of and at downstream of a power steering wheel unit forming part of the steering assembly. Since Horne et al. disclose the steering wheel movement sensor (13) located within a steering wheel (12) and column assembly (figure 1; col. 15-19) and the transmission drive shaft sensor (27) located at the vehicle road wheel (figure 1; col. 6, lines 31-36). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to locate the steering wheel movement sensor at upstream and the transmission drive shaft sensor (27) at the downstream of a power steering unit for the purpose of monitoring the steering movement of the steering assembly in order to generate a warning signal when there is no movement is detected.

**Regarding claim 7**, Horne et al. disclose the steering wheel movement sensor (13) located within a steering wheel (12) and column assembly (figure 1; col. 15-19).

**Regarding claims 8-9 and 12**, as mentioned in claim 1 above, wherein the first movement characteristic is angular displacement of the steering wheel and the at least

second movement characteristic is a steering angle of at least one road wheel (figure 1).

**Regarding claims 10-11**, Horne et al. also disclose the at least one first movement characteristic is displacement and the second movement characteristic is sensing by a acceleration sensor (15) in at least one direction (col. 6, lines 27-30).

**Regarding claim 67**, Horne et al. also disclose an acceleration sensor (15) for monitoring the acceleration/speed of the vehicle (col. 6, lines 27-30) and the internal processor determining the speed of the vehicle (col. 8, lines 14-17).

**Regarding claims 13, 25, 37, and 49**, refer to claim 1 above.

**Regarding claims 14-17, 26-29, and 38-41, and 55-59**, refer to claims 2-5 above.

**Regarding claims 18, 30, 42, and 60**, refer to claim 6 above.

**Regarding claims 19, 31, 43, and 61**, refer to claim 7 above.

**Regarding claims 20-21, 24, 32-33, 36, 44-45, 48, and 62-63 and 66**, refer to claims 8-9 and 12 above.

**Regarding claims 22-23, 34-35, 46-47, and 64-65**, refer to claims 10-11 above.

**Regarding claims 68-70**, refer to claim 67 above.

**Regarding claim 13**, refer to claim 1 above.

**Regarding claims 14-17**, refer to claims 2-5 above.

**Regarding claim 18**, refer to claim 6 above.

**Regarding claim 19**, refer to claim 7 above.

**Regarding claims 20-21 and 24**, refer to claims 8-9 and 12 above.

**Regarding claims 22-23**, refer to claims 10-11 above.

**Regarding claims 50-52**, as shown in figures 4-9, Horne et al. disclose at least one characteristic of driver initiates movement is extent and at least one characteristic of non-driver initiates movement is extent to show the differences in steering performance between an alert and sleepy drivers (col. 8, line 35 through col. 9, line 5).

**Regarding claims 53-54**, Horne et al. disclose the extent of driver initiated movements and non-driver initiated movements includes at least one of the RMS (Root Mean Square) averaging of the magnitude of driver initiated movements and non-driver initiated movements (col. 9, lines 8-19).

**Regarding claim 71**, Horne et al. disclose a sleepiness monitor (10) for determining the alertness/sleepiness of a driver including all subject matters as follows:

a first sensor in the form of a steering wheel movement sensor (13) for sensing at least one first movement characteristic of steering wheel (12, figure 1; col. 6, lines 15-19);

a second sensor in the form of a transmission drive shaft sensor (27), coupled to a vehicle road wheel (26), for sensing at least one movement of the road wheel (figure 1; col. 6, lines 31-36);

a distinguisher in the form of an internal microprocessor for receiving data from the various sensors (13, 27), for calculating at least at one relationship between the at least one first movement characteristic and the at least one second movement characteristic, for providing an appropriated audio/visual indication of sleepiness (col. 7, lines 1-12 and col. 8, lines 14-17), and determining the driver sleepiness level based

upon rhythm of sleepiness, timing and duration of sleep (col. 9, lines 1-67). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to know that the microprocessor is distinguishing between driver initiated movement and non-driver initiated movement based upon a driver input from a steering wheel movement sensor (13, col. 6, lines 14-16) and a non-driver input from a drive shaft sensor (27; col. 6, lines 31-36) in order to provide an indication for the purpose of awaken/alert the driver as he/she has been falling asleep.

**Regarding claims 72-75**, as mentioned in claim 71 above, wherein the at least one first movement characteristic and at least one second movement characteristic comprises a steering wheel movement and a road wheel movement characteristic (col. 6, lines 15-36).

**Regarding claims 76-77**, Horne et al. disclose the instant claimed invention except for: the first and the second locations are located respectively at upstream of and at downstream of a power steering wheel unit forming part of the steering assembly. Horne et al. disclose the steering wheel movement sensor (13) located within a steering wheel (12) and column assembly (figure 1; col. 15-19) and the transmission drive shaft sensor (27) located at the vehicle road wheel (figure 1; col. 6, lines 31-36). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to locate the steering wheel movement sensor at upstream and the transmission drive shaft sensor (27) at the downstream of a power steering unit for the purpose of monitoring the steering movement of the steering assembly in order to generate a warning signal when there is no movement is detected.



**Regarding claims 78-79 and 82**, as mentioned in claim 71 above, wherein the first movement characteristic is angular displacement of the steering wheel and the at least second movement characteristic is a steering angle of at least one road wheel (figure 1).

**Regarding claims 80-81**, Horne et al. also disclose the at least one first movement characteristic is displacement and the second movement characteristic is sensing by a acceleration sensor (15) in at least one direction (col. 6, lines 27-30).

**Regarding claim 141**, Horne et al. also disclose a driver alertness alarm (18, 21) responsive to an alarm from driver sleepiness monitor (10) for providing an alarm to a driver deemed not to be sufficiently alert (figure 1; col. 7, lines 1-12).

**Regarding claims 83, 95, 107, and 119**, refer to claim 71 above.

**Regarding claims 84-87, 108-111, and 125-129**, refer to claims 72-75 above.

**Regarding claims 88-89, 100-101, 112-113, and 130-131**, refer to claims 76-77 above.

**Regarding claims 90-91, 94, 102-103, 106, 114-115, 118, 132-133 and 136**, refer to claims 78-79 and 82 above.

**Regarding claims 92-93, 104-105, 116-117, 134-135**, refer to claims 80-81 above.

**Regarding claims 120-122**, as shown in figures 4-9, Horne et al. disclose at least one characteristic of driver initiates movement is extent and at least one characteristic of non-driver initiates movement is extent to show the differences in

steering performance between an alert and sleepy drivers (col. 8, line 35 through col. 9, line 5).

**Regarding claims 123-124**, Horne et al. disclose the extent of driver initiated movements and non-driver initiated movements includes at least one of the RMS (Root Mean Square) averaging of the magnitude of driver initiated movements and non-driver initiated movements (col. 9, lines 8-19).

**Regarding claims 137-140**, Horne et al. also disclose an acceleration sensor (15) for monitoring the acceleration/speed of the vehicle (col. 6, lines 27-30) and the internal processor determining the speed of the vehicle (col. 8, lines 14-17).

**Regarding claims 1142-145**, refer to claim 141 above.

### **Conclusion**

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

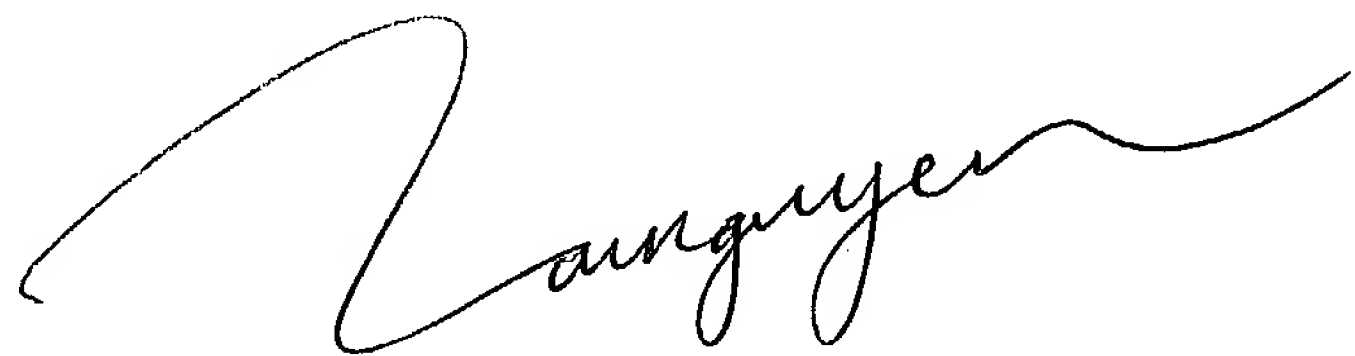
Shimoura et al. (US 6,046,671) and Kawakami et al. (US 5,574,641).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tai T. Nguyen whose telephone number is (703) 308-0160. The examiner can normally be reached on Monday-Friday from 7:30am-5:00pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's acting supervisor, Daniel J. Wu, can be reached at (703) 308-6730. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

305-3988 for regular communications and (703) 305-3988 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

A handwritten signature in black ink, appearing to read "T. Nguyen", with a large, stylized initial "T" and a long, sweeping horizontal line extending to the right.

June 4, 2004  
Tai T. Nguyen  
Examiner  
Art Unit 2632